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ABSTRACT

This review examines the psychological variables that influence academic performance, by exploring the psychosocial development of students and the individual differences that emerge in childhood and impact upon a student's later self-concept. Areas discussed include identity and achievement issues, gender differences in identity achievement, the influence of self-concept and self-esteem on motivation towards academic achievement, and identity development and academic achievement in non-white college students. Also examined is the role of self-efficacy and its relationship to learning and performance goals. It is argued that how students deal with their establishment of an adult identity will not only affect their willingness to engage continuously in academics, but also determine how they choose to treat their college experience. Self-efficacy can affect a student's choice of activities and ability to exercise coping skills in the face of obstacles. Self-efficacy is also an important construct for understanding why some students react with a sense of helplessness to academic challenge. Locus of control has also been linked to individual achievement and an understanding of the limitations to personal control may help students, particularly minority students, avoid self-blame and debilitating frustration. Contains 39 references. A brief Viewpoint column (Carole Morning) describes the development of a new Higher Education Extension Service (HEES) as an independent, not-for-profit organization. (GLR)

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# Higher Education Extension Service REVIEW

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Volume 3, Number 2 Winter 1992

Higher Education Extension Service **REVIEW**

## Viewpoint

***Looking Forward***

The Higher Education Extension Service (HEES) assists colleges, universities and other educational organizations in achieving improved academic outcomes for those students whose backgrounds and previous educational experiences are likely to lead to academic underperformance. HEES provides technical assistance and administers and evaluates campus programs based upon a continuing survey of pertinent research.

This issue of REVIEW offers my first opportunity to write to you as Director of a new Higher Education Extension Service. Recently HEES received an advance ruling as a not-for-profit public charity as described in section 501(c)(3) of the Internal Revenue Code. After three year at Yale University and at Teachers College, Columbia University, HEES has begun operation as an independent organization.

In 1991, much of HEES' work was devoted to assuring a solid beginning for the new independent organization.

- A Board of Trustees was formed, now chaired by Charles J. Hamilton, Esquire, a Partner of Battle Fowler.
- An Advisory Committee was also formed, and we look forward to to their counsel regarding our research and program during 1992.

*(continued on page 10)*

HEES has moved. All inquiries should now be directed to 621 West 145th Street, New York, NY 10031. (212) 283-3349.

# The Influence of Developmental and Emotional Factors on Success in College

***Introduction***

Combined measures, such as high school grade point average and Scholastic Aptitude Test scores, are often thought to be the best predictors of academic performance, yet they do so accurately less than 50 percent of the time (Lavin, 1965). In particular, SAT scores add only one to two percent to the accurate prediction of first year college grades over the high school record alone (Slack & Porter, 1980). Although this weak relationship between test scores and college performance may reflect flaws in test construction, it also reflects the limited capacity of existing tests to measure all of the variables that contribute to college performance. Many of these variables are nonintellective, but are essential for understanding why some college students perform worse and others better than the level predicted by traditional measures of intellectual ability.

The attainment of a college degree may require students to overcome obstacles beyond their control. These include economic hardship, housing and roommate problems, family obligations, or even difficulty in following institutional procedures. Also relevant are emotional obstacles. Students' feelings about themselves, particularly their level of self-confidence, motivation to achieve, anxiety level, and ego development are all important emotional variables that can have an impact on students' abilities to accept the challenge of a college curriculum.

In recent decades, researchers have begun to investigate potential uses of noncognitive measurement in education (Messick, 1979; Gelso & Rowell, 1967). Using an inventory of nonintellective measures such as personal efficiency, maturity of goals and overall adjustment, Gelso and Rowell (1967) discriminated between students with marginal predicted academic performance who persist through freshman year and those freshmen who drop out. There are inherent dangers and difficulties in using such noncognitive measures in educational practice, however. Value-laden variables can invite misuse (e.g., by mis-labeling), and can be used as merely another tool for selecting students out. On the other hand, in the best case, these noncognitive measures can alert educators to potential difficulties that may be remedied through appropriate intervention.

In attempting to understand how psychological variables can influence academic performance, it is useful to explore not only the developmental issues that are "age specific" to the college population, but also individual differences that emerge in childhood and impact upon a student's later self-concept.

**Psychosocial Development**

Erik Erikson, a prominent ego psychologist, traces the maturation

of the individual through eight stages of human development. Each stage presents a psychosocial task that must be adequately resolved for positive development to continue. At the core of Erikson's theory is the overall objective of acquiring a positive ego identity as an individual moves from one stage to the next. Although Erikson places these psychosocial stages at certain age ranges, the chronological ages are not fixed and may vary for different individuals.

According to Erikson (1980), society makes certain emotional demands on individuals, involving a "normative set of stresses and strains" at each stage of development. These demands provoke a "normative" crisis, manifested in a conflict between two opposing possible outcomes. For example, the psychological task of the first stage, "trust versus mistrust" (birth to 24 months), is to develop a sense of trust. This includes becoming trustful of others as well as developing a feeling of one's own trustworthiness. Developing a sense of trust in self and in the environment assists positive development and influences resolution of the second stage of psychosocial development: developing a sense of autonomy (age 2-3). Thus, each stage serves as a necessary building block for the next. Incomplete resolution of the psychosocial task of one stage adversely affects resolution of the next. If the conflict is worked out in a constructive and satisfactory manner, the positive quality becomes part of the ego and further healthy development is enhanced. However, if the conflict is not worked out, the negative quality is incorporated into the personality structure (Erikson, 1968; 1980).

Nevertheless, it is important to note that each crisis or conflict appears to be most pronounced at the age at which it is placed but is rarely completely resolved *(see Table 1)*. The same tensions may resurface later in life. For example, in young adulthood, when the psychosocial task centers around intimacy versus isolation (stage 6), issues of trust (stage 1) may re-emerge.

**TABLE 1 Erikson's Stages of Psychosocial Development**

| Stage | Typical Age Range | Positive Resolution | Negative Resolution |
|---|---|---|---|
| 1 | Birth to 24 months | A sense of trust | A sense of mistrust |
| 2 | 2 to 3 years | A sense of autonomy | A sense of shame and doubt |
| 3 | 3 to 6 years | A sense of initiative | A sense of guilt |
| 4 | 6 to 12 years | A sense of industry | A sense of inferiority |
| 5 | 12 to 18 years | a sense of identity | A sense of role confusion |
| 6 | 18 to 35 years | A sense of intimacy | A sense of isolation |
| 7 | 35 to 60 years | A sense of generativity | A sense of stagnation |
| 8 | 60 years to death | A sense of integrity | A sense of despair |

Erikson's theory emphasizes the idea of optimum balance. For example, at the fourth stage of development the conflict centers around developing a sense of industry versus a sense of inferiority. Too little industry interferes with school-age childrens' need to acquire the basic educational skills that today's society demands; too much industry results in individuals who believe that others value them only to the extent that they are able to produce something (Goldhaber, 1986).

Particularly relevant to the field of education, and most prominent during the stage of "industry versus inferiority," is Erikson's idea that in order to acquire strong and healthy egos, children must receive consistent and meaningful recognition of their accomplishments (Muuss, 1988). Later, in adolescence and during the college years, individuals who did not adequately resolve the stage of "industry versus inferiority" may continue to harbor feelings of self-doubt regarding their competence and fear that they will never amount to much (Muuss, 1988). A consequence of this conflict is work paralysis and a sense of futility - states of mind that are most likely to contribute to problems during adolescence, when the task of developing a clear and consolidated sense of true self comes to the forefront.

**Identity Achievement**

Although identity continually evolves throughout one's life, the identity crisis is most pronounced during adolescence and the college years. This is a period in the life cycle when individuals must establish a sense of personal identity and struggle with the difficulties of assuming a social role. Identity achievement requires assessment of personal strengths and weaknesses and a determination of how to marshal them. To complete the search for an identity, adolescents must ask the question "Who am I?" and develop an orientation toward the future. This process involves a commitment to a system of values, religious or secular political beliefs, and vocational goals — in short, a beginning philosophy of life.

**Marcia's Identity Statuses**

Building on Erikson's construct of "identity versus identity confusion," Marcia (1966; 1980) in semi-structured interviews, identified various patterns and common issues operating in college youths, aged 18-25, as they cope with the identity struggle.

Marcia asked students to respond to questions concerning their attitudes, values, and goals on topics of

occupation and political and religious ideologies. Because Marcia limited his sample to males, caution must be applied when generalizing his results to females. The significance of this restriction will be discussed later in this section.

Marcia identified four identity statuses that can emerge in college, and their relationship to self-concept formation:

1) ***Identity Diffusion***: Such individuals have not yet experienced an identity crisis and have not made a commitment to a vocation or set of beliefs. Still not committed to a personal value structure, they are highly impressionable and are open to all kinds of influence. Because they lack a firmly established sense of identity, they change opinions about themselves very easily and are vulnerable to evaluative feedback about themselves.

2) ***Foreclosed Status***: Such individuals also have not yet experienced an identity crisis, but they have made commitments to an occupation and to values based on a determination by other people, usually their parents. States Muuss (1988), "Foreclosure subjects frequently tend to become their parent's alter egos. When a young man is asked what he wants to become, he may answer, `I want to be dentist,' and when asked why, he may respond, `Because my father is a dentist'" (p.71).

College is not perceived by the foreclosed student as an opportunity to explore vocational options or to work through identity issues. Instead, it reconfirms childhood value systems and provides an opportunity to attain the parents' goals. Although "foreclosed" students have the highest grade point averages (Muuss, 1988), they are often characterized by a rigid personality structure and tend to avoid conflict. In general, they are also more influenced by the judgments of others than by their own personal evaluations. They are vulnerable to an identity crisis later in life, in part because they never permitted themselves a period of self-exploration a necessary process for true identity achievement (Muuss, 1988). Nevertheless, goal-directedness is a characteristic that colleges reward, particularly goals of a professional nature, so that foreclosed individuals are rarely recognized as in need of assistance.

3) ***Moratorium Status***: Approximately 30 percent of today's college students (ages 18-25) are in the moratorium stage (Muuss, 1988). Such individuals are in the active process of searching for their identity with the goal of preparing for commitment. They are often uncertain and overcritical of "the system." They challenge what they see and are capable of diagnosing problems, although they are not able to suggest realistic alternatives because, "to do so requires identity, willingness to compromise..." (Muuss, 1988, p.73). Moratorium is considered an essential prerequisite for identity achievement and should not be discouraged. In fact, many academicians have expressed concern that American society's emphasis on good grades and awards exerts too much pressure on youth and diminishes their opportunity to enjoy a period of exploration without the pressure for accountability.

4) ***Identity Achieved Status***: Such individuals have experienced and resolved the adolescent identity crisis and, as a result, have begun to develop long-lasting commitments. Identity achieved students "feel in harmony with themselves, accept their capabilities, limitations and opportunities" (Muuss, 1988, p.74).

## Other Identity Achievement Issues

In considering Marcia's different identity statuses, it should be recognized that they are not permanent qualities of individuals but, rather, represent their degree of resolution on topics that are significant in their lives at a certain point in time. Degree of resolution is likely to increase over time. It is also important to note that identity status is defined in terms of a particular aspect of self-identity. Explains Goldhaber (1986), "It is possible that a student who has reached identity achievement on a topic such as occupation is experiencing moratorium with respect to marriage, and is both certain and uncertain about a far removed topic such as retirement" (p.347).

## Gender Differences In Identity Achievement

The issue of whether Marcia's findings are equally representative of the identity formation process in college women has been debated by numerous researchers (Hodgson & Fischer, 1978; Ginsburg & Orlofsky, 1981). According to Hodgson and Fischer (1978), women have a more difficult time focusing on a pathway toward identity achievement, resulting in a longer period of moratorium. While males define themselves largely in terms of career and ideological beliefs, women must contend with greater ambiguity - in part because they are confronted with several choices for developing an identity that may be perceived as mutually exclusive because of cultural conditioning. Career and marriage represent two potential pathways. As well, the primary emphasis for women continues to revolve around issues of acquiring interpersonal competence and a set of internal beliefs that will facilitate their relating well to others. Moreover, these alternative pathways for identity development in college men and women do not emerge for the first time in college. Instead, the difference reflects the cumulative impact of the socialization patterns of males and females in our culture (Goldhaber, 1986).

It has also been suggested that men and women differ with respect to the "ease" with which they are able to reach an identity achievement status (Goldhaber, 1986), since it is through crisis and conflict that individuals clarify their beliefs, differentiate themselves from others, and become autonomous. For women, conflict may be more difficult to initiate and work through, particularly since current socializa-

tion patterns are more supportive of male involvement in conflict than they are of female. Women fear hurting others' feelings because it contradicts the feminine ideal of care and concern (Gilligan, 1982). Because moratorium (which by definition involves conflict) is a necessary prerequisite to identity achievement, this step may be more easily pursued by males.

Men and women also tend to hold different visions about their futures. Historically (pre-1960s), women frequently married right after high school or college and were not faced with the option of alternate career paths. Conflict regarding effective negotiation of career and family did not exist for women until recently. As a result, many women still experience ambivalence about aggressively pursuing their careers. According to Angrist and Almquist (1975) women are taught to be flexible about the future and are pressured to remain open to a variety of options in order to accommodate multiple adult roles (i.e., wife, mother, worker). This flexibility orientation fosters uncertainty and hesitation during college that can cause women to avoid commitment, particularly active commitment to a career. As Angrist and Almquist (1975) explain, "even among the most unbending careerists and non-careerists much vacillation, worry and uncertainty prevail. they (college women) exhibit the common ambivalence about a woman's life, whether to forge ahead or whether to hold back" (p.81).

**Identity Development Of Non-White College Students**

Individuals form part of their personal identity from social interactions that invariably involve learning what others think and expect of them. Part of the identity formation process requires that individuals incorporate, through a process of testing and selection, various self-representations provided by others. As suggested by Erikson (1968, 1980) and Marcia (1966,1980), different sociocultural influences become important at different points in a person's development. During adolescence, peers and institutions outside of the family (e.g., school) become increasingly important, while the once powerful influence of parents and adult authority figures diminishes.

The term "racial identity" refers to a sense of collective identity based on one's perception that he or she shares a common racial heritage with a particular racial group (Helms, 1990). If one were to assume that racial identity follows the same course of development as other aspects of identity, parents and authority figures would be most influential early on, followed by the influence of peers and social institutions in later years (Helms, 1990).

However, racial identity development is different from other aspects of identity development because sociocultural communications from the environment to the individual typically focus on group related appearance instead of an individual's unique abilities and interests. Thus, an individual develops an ascribed racial identity primarily on the basis of environmental reaction to his or her physical and behavioral characteristics. If an individual is socialized in a multi-racial environment, in which role models consider any race to be a "normal and desirable part of themselves as well as others," the individual will develop a positive and pluralistic racial identity (Helms, 1990, p.88). In contrast, individuals raised in an environment where they are taught to denigrate or devalue their racial group may find a healthy racial identity difficult to establish. According to Helms (1990), it is easier for white persons to develop a positive view of themselves because they belong to a "favored" group. If an individual receives conflicting messages about race, conflicting feelings and cognitions about racial identity predominate.

Helms (1990) believes that for most African Americans, racial identity is an issue that influences a wider range of personality and related behaviors, consequently consuming a far greater amount of cognitive and emotional energy, than it does for whites. Blacks who develop a successful black identity (i.e., a positive black identification with concomitant feelings of respect for diverse cultures) are able to do so because parents, family and community actively provided sources of positive identity (Helms, 1990).

There is considerable evidence that the historically black college environment, where blacks feel mainstream and "normal," is beneficial for black students' self-esteem. In addition, black colleges offer support, encouragement, and acceptance that enhances black students' academic self-esteem (Fleming, 1985; 1986). In contrast, black students on white campuses report feelings of isolation, marginality, and a sense of being outsiders. Like other students of color, and women on predominantly male influenced campuses, they often feel forced to rely on their own group for support. Not surprisingly, black students on white campuses experience a greater range of problems than do whites in their efforts to adapt socially, psychologically, and academically to their university (Loo & Rolison, 1986; Livingston & Stewart, 1987).

How students view themselves with respect to race can influence their academic functioning. Gay (1985) suggests that impaired ethnic identity development can disrupt intellectual performance and may also lead to interpersonal and disciplinary problems. A student's level of ethnic identity development is believed to influence a personal sense of reality and emotional well-being, which in turn affects response to school environments and instructional styles. As ethnic minority youth constructively work through the stages of identity development, their ethnic self-concept becomes more positive and they are more emotionally prepared to focus their energies on academic activities in the classroom.

Gay (1985) suggests that instructors can help minority students by becoming more cognizant of the

## Black verses White Racial Identity Development

| Black Racial Identity Development | White Racial Identity Development |
|---|---|
| 1. Preencounter: ethnic identity is subconscious or dominated by Euro-American conceptions of ethnicity. | 1. Contact: oblivious to racial/cultural issues; generally views blacks with curiosity and/or trepidation. |
| 2. Encounter: conscious confrontation, begins to search for new foundations for an identity. | 2. Disintegration: awareness of the social implications of race on a personal level; may feel caught between white and black culture, oppression and humanity. |
| 3. Post-Encounter: inner security, self-confidence and pride in one's ethnicity. | 3. Reintegration: idealization of everything thought to be white and denigration of everything thought to be black. |
| | 4. Pseudo-Independence: internalization of whiteness and capacity to recognize personal responsibility to ameliorate the consequences of racism. |
| | 5. Autonomy: a positive, nonracist white identity and valuing of cultural similarities and differences. |

*Source*: Helms, J., & Carter, R. (1980). Development of the white racial identity inventory. In J. Helms (Ed.), *Black and white racial identity development*. Greenwood Press: NY

development nature of the ethnic identity process and its potential impact on a student's sense of competency and academic functioning. Stage of ethnic identity therefore becomes essential in determining a student's readiness to benefit from certain instructional efforts. Gay (1985) suggests that institutions consider developing an instructional program that encourages minority students to become culturally conscious and that simultaneously works toward the elimination of self-denigrating beliefs. For example, students in the "pre-encounter" stage of ethnic identity development (that is, students who are not yet culturally conscious and accept their identity as defined by whites) would benefit from activities that are informational and designed to sensitize them to the realities of ethnic and cultural diversity in the United States. Teaching pre-encounter students the basics of ethnic diversity would encourage them to develop a foundation for investigating their own individual ethnic histories and those of other ethnic cultures. Through this type of instruction, Gay (1985) believes that students will be better equipped to find constructive outlets for their anxieties and may learn useful strategies for resolving their own ethnic identity conflicts and those with the external world.

### Self-Concept And Self Esteem: Their Influence On Motivation For Academic Achievement

There is a great deal of discussion about what self-concept means. While self-concept can be defined as a cognitive appraisal of the self, self-esteem involves an emotional appraisal of the self and is reflected in an individual's self-confidence. However, it has been pointed out that since self-concept and self-esteem are interrelated, all descriptions of the self are influenced by one's emotional life (Verma & Bagley, 1982). In this discussion, therefore, self-concept will be used interchangeably with self-esteem.

Comparison with others, the opinions of others, and a reliance on certain standards which everyone accepts are all socializers that can have a strong influence during the process of a person's self-concept or self-esteem formation. Explains Harter (1990, p.356): "The self is a social construction; that is, the self-concept represents, in large part, the incorporation of the attitudes that significant others hold about the self." Academic achievement and ability are areas associated with self-esteem (Wylie, 1974). For instance, positive self-esteem can act as a buffer protecting the self against stress, and it is clearly linked to enhanced motivation (Harter, 1990).

### Self-Efficacy

Self-efficacy, which is an expression of self-esteem, has also been closely tied academic performance. As defined by Bandura (1977), self-efficacy refers to a personal belief in one's capability or skill mastery necessary to attain a goal or execute a performance. That is, it is narrower and more goal specific than self-esteem, which is more global. In fact, an individual can have low self-esteem but good self-efficacy in relation to a particular subject like French or chemistry.

Self-efficacy theory offers important implications for the field of education. Expectations of personal mastery may affect students' choices of activities, how much effort they will expend, and how long effort will be sustained in the face of stressful situations (Tuckman & Sexton, 1989). For example, a student's confidence in his or her math ability may determine whether an effort to solve a mathematical problem will even be initiated, let alone sustained when complications arise. As Bandura (1977, p.194) explains, "people fear and tend to avoid threatening situations they believe exceed their coping skills, whereas they get involved in activities and behave assuredly when they judge themselves capable of handling situations that would otherwise be intimidating."

Tuckman and Sexton (1989) conducted a self-efficacy study with college students to determine if there was a relationship between self-efficacy beliefs and a student's ability to self-regulate academic performance. Students were asked to write test items for extra credit; because the assignment was not mandated, the initiative of the student determined regulation of task performance. Based on Bandura's (1982) theory that individuals who do not believe they can exercise adequate control over their actions tend to undermine their own efforts to cope with demanding situations, it was predicted that self-efficacy expectations would distinguish between high and low performing

students. In accordance with self-efficacy theory, Tuckman & Sexton (1989) found that self-efficacy expectations played an important role in distinguishing between the performance levels of various students, with students high in self-efficacy displaying the highest level of participation and performance in the extra credit assignment.

Recent research in this area suggests that the enhancement of self-efficacy may be most appropriate for students who underestimate their abilities (Lent, Brown, & Larkin, 1984), because increasing self-efficacy may improve ability through its enhancement of self-confidence and coping behavior. However, if both developed ability and self-efficacy are low, interventions should be directed toward improving ability through remedial programs. If serious efforts at improving skills do not result in improvement, as a last resort, counseling students towards alternate academic majors may be necessary.

*Self-efficacy and Its Relationship to Learned Helplessness*

Because the strength of individuals' convictions in their own effectiveness is likely to effect whether they will even try to cope in a given situation, self-efficacy becomes an important variable in understanding why some students react with a sense of helplessness to academic challenge.

Learned helplessness refers to an individual's perception of independence between their behavior and the onset or termination of aversive events (Dweck & Licht, 1980). Learned helplessness may explain why some students respond particularly adversely to failure. While for some students, failure can have a positive impact on subsequent academic performance - escalating effort, intensifying concentration, and increasing persistence - students with learned helplessness respond quite differently to failure. Effort is curtailed, strategies deteriorate, and performance declines. These students often become incapable of solving the same problems they were capable of solving only shortly before the experience of failure (Dweck & Licht, 1980).

*Sex Differences in Learned Helplessness.* Research indicates that females act more helpless in achievement situations than do males (Dweck & Licht, 1980). Females also predict lower grades for themselves and predict poorer performance on novel experimental tasks even when they have already outperformed males in that area. An explanation for this gender difference lies in the different attributions males and females make about failure. Males do not tend to see failure in academic settings as indicative of their competence. Instead, they tend to view failure as stemming from controllable factors, such as motivation, and respond to failure in a "mastery" manner, with improved performance and increased persistence (Dweck and Licht, 1980).

The source of this gender attribution difference has been traced to differences in the feedback teachers give school-age boys and girls regarding their competence. Classroom studies indicate that teachers attribute boys' failures to a lack of motivation eight times as often as they do girls' failures. Thus, it is easier for boys to view failure as unrelated to themselves personally. For example, a boy can view failure as a reflection of his teacher's attitude toward him. Furthermore, if a boy does interpret feedback as indicative of an intellectually deficient performance, he can attribute it to a lack of personal motivation. As Dweck & Licht (1980) explain, "boys learn a variety of ways to interpret the negative evaluations they receive - interpretations that allow them to maintain a belief in their ability to succeed despite the occurrence of failure" (p.201).

In contrast, teachers' reactions to girls' performance tend to make it more likely for girls to attribute failure to poor ability, not to lack of effort. This pattern results because the majority of criticism girls receive is aimed at intellectual features of their work. However, girls are also more likely to receive more overall praise than boys: thus, girls are less likely to view criticism as resulting from teacher bias. In addition, teachers and girls view girls as more highly motivated, making attributions of failure to a lack of motivation more difficult to justify.

*Attribution Theory*

Extensive research that focuses on the attributions individuals make in response to success or failure points to the powerful impact of psychological factors on learning. Attribution theory suggests that the way in which a student interprets a learning situation can determine whether adaptive or maladaptive motivational patterns will result. Indeed, personal attributions are so powerful that evidence indicates that while two groups of children can start out with virtually the same ability and performance levels, their perceptions about the causes of their successes and failures are eventually what distinguishes them (Dweck & Licht, 1980).

Motivational patterns are considered a product of students' interpretations about the causes of their successes and failures (Dweck & Licht, 1980). These beliefs differentiate between those students with a "mastery" orientation and those with a "helpless" orientation. Individuals with a helpless orientation feel that failure is insurmountable; they have a greater tendency to attribute their failure to *stable* characteristics, like a lack of ability, over which they believe they have no control.

In contrast, individuals with a mastery orientation believe that failure is rectifiable. Failure is attributed to characteristics that are less stable and more variable, such as insufficient effort. Failure therefore motivates these individuals to work harder. Research indicates that individuals with a helpless or mastery orientation differ markedly in terms of the possible plans of action they consider when they encounter difficulties, although they do not differ in terms of their intellectual ability (Dweck & Licht, 1980).

When they fail, helpless individuals dwell on the present, dwell on

the negative, and seek to escape from the situation. Mastery oriented individuals cultivate cognitions that propel them to look toward the future, emphasize the positive, and invest their energies in actively pursuing solution-relevant strategies.

Fortunately, negative cognitive orientations are amenable to change. For example, attribution training that taught helpless children to take responsibility for their failures caused them to reexamine their perception of failure and led to improved persistence. Furthermore, many of the children receiving this training began to show performance after failure that was superior to their performance prior to failure (Dweck, 1975).

Attribution retraining has also been successfully applied to college freshmen who were concerned about their academic performance (Wilson & Linville, 1982). Frequently, first semester college freshmen panic when they do not perform as well as they anticipated; they view academic problems as confirmation of their inability to succeed in college, which, in turn, can make studying even more difficult to manage. Wilson and Linville (1982) designed a study in which freshmen were given persuasive information indicating that, on the average, college students improve their GPAs from the freshman to upperclass year. By teaching students to attribute performance difficulties to temporary factors that could be changed, rather than to permanent deficiencies, a more positive mood among them was created; they were less likely to drop out during sophomore year, and they also achieved a significantly higher GPA one year later.

*Implications for Long-Term Academic Goals*

Attribution theory becomes critical to academic performance because students' personal perceptions of causality impact on their long-term goals and aspirations. Individuals with maladaptive attribution patterns may avoid challenging courses of study, drop out of courses that pose a threat of failure, or experience impaired performance when faced with challenging assignments (Dweck, 1986).

In addition to learned helplessness, already discussed, maladaptive attribution patterns among females and minorities may also explain why they are less likely to enter math and science related careers (Tittle, 1986; Howard & Hammond, 1985; Mickelsen, 1985). In grade school, for example, girls equal boys in mathematical achievement, yet they fall behind during the junior high and high school years, a time when new conceptual frameworks are introduced (i.e., algebra and geometry). All students are likely to experience failure or confusion during this new math learning. However, the confusion encountered in math, and the concomitant threat to a student's sense of competency, appear to be more debilitating for females, who have shakier expectancies and more frequently attribute their failure to lack of ability than do males. This confusion and loss of self-confidence are not as likely to be encountered in verbal areas because they do not require students to make leaps to qualitatively different tasks. Once reading and writing are mastered, increments in difficulty are gradual and students are able to draw on many existing skills for mastering new material. In short, the difficulties encountered in math learning make it more compatible with the motivational patterns of boys than girls. Interestingly, sex differences in mathematical achievement are greatest among the most able students, with high achieving girls tending to find mathematics least appealing. This may be because such girls, even more than their low achieving peers, rely on success in order to sustain their confidence. In contrast, able boys are more attracted to tasks that pose some challenge to mastery because they have been taught to attribute their failures to effort or strategy instead of to ability (Dweck, 1986).

Although theories other than motivational explanations may help elucidate why white males pull ahead of females and certain minorities in mathematical achievement, appropriate motivational interventions may offer an effective strategy for diminishing the achievement discrepancies between males and females. Examining current educational practice from the perspective of teacher impact on student attributions may lead to strategies that reverse the current maladaptive motivational patterns females and minorities are learning to acquire early in their education. For example, Brophy (1986) recommends that teachers can reinforce all students appropriately by acknowledging correct answers and delivering feedback that is specific rather than global, simultaneously focusing attention on the content of the answer rather than on the student. When responding to students' partly correct or incorrect answers, it is also recommended that teachers acknowledge whatever part may be correct and then try to elicit an improved response from the student.

*Learning Versus Performance Goals*

Studies in attribution retraining also suggest that the type of goal teachers set for their students can result in either a mastery or helpless motivational pattern, depending upon a student's level of confidence in his or her present ability. Mastery and performance goals represent two distinct learning goal orientations.

Learning goals (e.g., a goal of learning a new math section by the end of each week) tend to be short-term and successes are incremental so that students have a means to mark their progress. Behavior is oriented toward self-improvement, irrespective of the performance of others. In contrast, performance goals (e.g., to earn an A or avoid an F) pressure individuals either to acquire favorable judgments of their competence or to avoid negative evaluations of their ability. Thus, the focus becomes one of social comparison and competition.

The chief distinction between the learning and performance goal

framework is the focus on effort versus ability. Learning and performance goals also lead to different outcomes in terms of how satisfaction is derived. Because learning goals are based on the idea of establishing "do-able" short-term goals that allow positive self-evaluation in a recurring and timely manner, intrinsic interest and a sense of personal ability are fostered. This approach suggests that if students are placed in carefully structured learning environments that provide opportunities for self-direction, a sense of their own abilities and personal control will be enhanced (Stark, Shaw, & Lowther, 1989).

In contrast, performance goals are often long-term and, if too far removed, may even fail to mobilize effort effectively. With performance goals, the main incentive typically derives from demonstrating that a student can exceed the performance of others. Unfortunately, this type of teaching method is especially debilitating for individuals who are lacking in confidence or in self-perceived ability or skill. Furthermore, performance goals induce a conservative approach to learning because students often do not wish to risk failure or expose their weaknesses. Therefore, students may choose either personally easy tasks so that success is guaranteed or excessively difficult tasks so that failure will not suggest low ability. Performance goals can also have negative consequences for high ability students. Students with confidence in their ability may decline challenging tasks in order to appear smart rather than risk a possible negative assessment.

*Locus of Control and Achievement Theory*

Achievement motivation has also been linked to an individual's "locus of control." Individuals with an internal locus of control believe their successes and failures result from their own actions. Success or failure is attributed to their ability (or lack of it) or to the amount of effort they put forth. In essence, individuals with an internal sense of control believe that their own actions will determine the rewards they receive in life (Gurin & Epps, 1975).

In contrast, individuals with an external locus of control believe that success or failure is something that happens to them. External factors, such as fate or luck, determine the outcome of events. For example, when students with an external locus of control succeed, they believe that it is because they had an easy task or they were lucky. When they fail, it is because they had a difficult task, back luck, or a professor who didn't like them. Summarizing the external's perception of achievement, Franken (1988, p. 397) explains, "sometimes they win and sometimes they don't."

The Protestant Work Ethic, which includes the belief that hard work brings reward, has been tied to theories of achievement, specifically, locus of control. It has been suggested that this work ethic encourages parents to stress self-reliance and independence at an early age, resulting in children with higher achievement needs and an internal locus of control (McClelland, 1961; Franken, 1988).

The prevailing view in the literature is that African Americans are more external in their locus of control than their white counterparts (Gates, 1991). However, locus of control may need to be understood differently if white and black students are to be compared. Students' control orientations reflect their personal expectancies about life chances and opportunities. For example, a student may have a commitment to the Protestant Work Ethic, but this commitment does not necessarily reflect expectations about his or her own personal life.

Minority interventions (i.e., counseling, behavioral modification programs) have often stressed teaching students to increase their sense of internal control. While developing a positive sense of control can contribute to many positive outcomes, Gurin & Epps (1975) warn that the meaning of internal and external control is far too complicated to simply advocate increasing an individual's sense of control as a global personality disposition. Based on their research studies conducted on black college campuses between 1965 and 1970 (a time when the black activist movement was burgeoning on college campuses), Gurin and Epps (1975) found that an external control orientation served a constructive purpose for many black students. In particular, black male students with a dual control orientation (i.e, a sense of personal control coupled with an external orientation) were able to perform well academically and aspired to challenging careers. They believed in their personal abilities, yet were attuned to the social and economic realities that limited their opportunities. Described by Gurin and Epps (1975) as "system blaming," the students were aware of racial discrimination and blamed it for the status differentials between blacks and whites. Yet this awareness did not stop them from personally aspiring to jobs historically closed to blacks. Not only did blaming the system coincide with more effective academic performance, but it also promoted a healthy motivation for assessing the obstacles to minority achievement. Strikingly, this external orientation coincided with a strong collective achievement found across many historically black colleges during the years of the black student activist movement.

Although achievement theory typically views familial and group loyalties as inhibitors to individual advancement (due to the assumption that cooperation inhibits competition), involvement in the goal of collective black achievement promoted collective community results, hard work, and persistent effort, much like the collectivity practiced on Israeli kibbutzi. While there are currently strong arguments for collaborative study and learning for all students, there appears to be a societally induced cultural component among blacks that makes this approach even more effective. For example, Philip Triesman, (1988) who runs a Calculus support program for minority college students at

Berkeley, finds that collaborative learning is an especially effective method for enhancing black students' motivation and performance.

While Gurin and Epps (1975) advocate helping black students to develop greater control over their personal lives, they believe that students should not be convinced that they can individually control what happens more broadly in their society (e.g., institutions, events), but that teachers and counselors should help them to understand the complicated dynamics that perpetuate poverty and racial inequality in American society. Furthermore, Gurin and Epps (1975, p. 393) believe that institutions would be doing students a "grave disservice" if they were to try to make them generally more internal; students need to understand that only some problems can be resolved by personal action, and that many problems must be resolved through collective action and/or the political power of the group.

**Conclusion**

Although developmental and emotional factors are frequently overlooked as potential influences on college performance, they are important variables that can impact upon a student's ability to meet the challenge of learning. Erikson's (1968; 1980) theory of psychosocial stages illustrates how an individual's present sense of competency is shaped by the resolution of past developmental conflicts, particularly those revolving around the establishment of trust, autonomy, and initiative. Marcia's work with college youth suggests that the establishment of an adult identity is a gradual process, and is achieved in different ways depending on an individual's life experience, sex, and racial identity. How students resolve issues pertaining to self-identity not only affects their willingness to engage continuously in academics but also determines how they choose to treat their college experience.

Self-esteem plays an important role in academic success. Self-efficacy, which is a more concretized expression of self-esteem, may affect a student's choices of activities and ability to exercise coping skills in the face of obstacles. Self-efficacy is also an important construct for understanding why some students react with a sense of helplessness to academic challenge. When confronted with academic failure, female students in particular are susceptible to feelings of helplessness. Such feelings result, in part, from maladaptive attribution patterns learned early in grade school. Attribution patterns are learned ways of interpreting the causes behind one's successes and failures. Maladaptive attribution patterns may lead some students to view the causes of their successes or failures as beyond their control. However, attribution patterns are amenable to change, most effectively through the implementation of appropriate learning goals and attribution retraining programs.

Locus of control has also been linked to individual achievement. While a global sense of internal control is generally assumed to be optimal, an understanding of the limitations to personal control may help students, particularly minority students, avoid self-blame and debilitating frustration.

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## Viewpoint

***(continued from page 1)***

- Continuing support from the Exxon Education Foundation enabled the formulation and initial implementation of business and development plans.
- HEES' research staff synthesized a basic knowledge base, drawing from a variety of disciplines concerned with the education of college students, particularly those who underachieve. Issues of REVIEW this year will reflect that work.
- Finally, HEES staff moved to a new office.

### *Outlook*

College campuses have not escaped the economic climate that now grips the country at large. It is a climate which threatens to effect, negatively, both the extent and the quality of education for those who are most in need and who the country most needs to be better educated. In the face of uncertainties in both private and public sectors for continuing educational support, HEES must:

—make clearer to post-secondary institutions that improving the academic outcomes of students at academic risk will benefit all students, and institutions also;

— widely disseminate, through replication, technical assistance and publications, well informed and positively evaluated strategies that improve students' academic functioning.

Finally, in closing, as HEES begins an exciting new stage in its growth, the staff and I wish to express our deep appreciation for the interest and comments of REVIEW readers; for the commitment and hard work of Edmund Gordon and Erwin Flaxman, who have served until this year as HEES' Principal Investigators at Yale and at Teachers College; for the generous and continuing support of the Exxon Education Foundation and the personal interest expressed by its Directors, first Arnold Shore and now Edward F. Ahnert; for the patience and guidance of our Exxon Program Officers, first L. Scott Miller and now Richard Johnson; and for the support of the Aetna Foundation and its Program Officer, Gail Promboin, which enables this year's REVIEW.

*Carole Morning*

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